# Oxygen therapy and palliative care in patients with heart failure. Response

# Oxigenoterapia y cuidados paliativos en pacientes con insuficiencia cardiaca. Respuesta

# To the Editor,

We are grateful to Carratalá et al.<sup>1</sup> for their response to our article. We fully agree with their comments on the palliative care of heart failure patients, although it is important to note that the studies they highlight essentially relate to patients with acute decompensated heart failure. The study by Rochwerg et al.<sup>2</sup> centers exclusively on noninvasive ventilation of patients with acute respiratory failure, while the study by Tinelli et al.<sup>3</sup> is a metaanalysis including 775 acute respiratory failure patients treated in the emergency department. The Tinelli et al. study compared noninvasive ventilation, high flow nasal cannula oxygen with conventional oxygen over the other treatments in relation to the need for intubation, treatment failure, hospitalization, and mortality; moreover, the best-tolerated treatment was conventional oxygen therapy.

There are also other factors that should be considered. Our consensus document is the first to address palliative care in heart failure in Spain. Palliative care is considered an essential component of the treatment of heart failure patients,<sup>1</sup> yet it is not prioritized in Spain, where its use in this context is largely tokenistic, especially when contrasted with the extensive access to palliative care provided to cancer patients.<sup>4</sup> Our document has a general focus and does not go into the specific details of each treatment option for heart failure patients in palliative care. Instead, we establish general care guidelines and emphasize the need to consider and implement them early and progressively in the care of these patients. We are aware that the preparation of a more exhaustive document would probably require a dedicated supplement involving other scientific societies, in order to include input from all stakeholders with an interest in the

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# To the Editor,

The article by Goicolea Ruigómez et al.<sup>1</sup> evaluated the results of coronary artery bypass grafting (CABG) in Spain from 2013 to 2015. The study established a proportional relationship between the hospital procedure volume and the in-hospital mortality and rehospitalization rates. The authors' recommendations were to concentrate CABG procedures in high-volume centers in Spain and publish the risk-adjusted outcomes of these interventions.

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development of consensus protocols for the treatment of heart failure patients.

José Manuel García-Pinilla,<sup>a,b</sup> Pablo Díez-Villanueva,<sup>C,\*</sup> María G. Crespo Leiro,<sup>b,d</sup> and Clara Bonanad-Lozano<sup>b,e</sup>

<sup>a</sup>Servicio de Cardiología, Hospital Universitario Virgen de la Victoria, IBIMA, Málaga, Spain

<sup>b</sup>Centro de Investigación Biomédica en Red de Enfermedades Cardiovasculares (CIBERCV), Instituto de Salud Carlos III, Madrid, Spain

<sup>c</sup>Servicio de Cardiología, Hospital Universitario de la Princesa, Madrid, Spain

<sup>d</sup>Servicio de Cardiología, Complejo Hospitalario Universitario de A Coruña, A Coruña, Spain

<sup>e</sup>Servicio de Cardiología, Hospital Clínico Universitario de Valencia, Valencia, Spain

\* Corresponding author:

*E-mail address:* pablo\_diez\_villanueva@hotmail.com (P. Diez-Villanueva).

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In both CABG and percutaneous coronary interventions (PCI), there is a clear link between a higher volume per center and better outcomes.<sup>2</sup> In the present article, the volume of CABG procedures was low (less than 200/y) in 87% of our centers. However, the total mortality rate reported in the Spanish Society of Thoracic and Cardiovascular Surgery registries of interventions for 2013 to 2015 was 2.8%, a value lower than the 3% reported in this article for CABG alone. In addition, the risk-adjusted mortality rate has been persistently < 0.6, excellent results that are comparable to those recorded by the American (The Society of Thoracic Surgery) and European (European Association for Cardio-Thoracic Surgery) societies.

The risk-adjusted in-hospital mortality and rehospitalization rates reported indicate that the outcome depends on the hospital volume of surgeries. However, extrapolation of data from administrative databases to analyze clinical events is subject to considerable bias. Variability in the CABG volume and mortality when clinically and administratively contrasted is, in both cases, an unacceptable 20%.<sup>3</sup> It is telling that cardiogenic shock is listed among the comorbidities of patients "scheduled" for CABG treatment, and the